

REMARKS

The non-final Office Action mailed November 23, 2007, has been received and reviewed. As of the November 23, 2007 Office Action, Claims 1-14 were pending and presently stand rejected. Applicant has cancelled Claims 1-14 herein and added new Claims 15-31. As of this FIFTH AMENDMENT AND RESPONSE, Claims 15-31 are believed to be in condition for allowance and Applicant respectfully requests reconsideration of the application as amended herein.

35 U.S.C. § 112, ¶ 2 Rejections

The Examiner has rejected Claims 1 and 6-8 under 35 U.S.C. § 112, ¶ 2 as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Applicant has cancelled Claims 1-14 herein mooting the indefiniteness rejection.

35 U.S.C. § 103(a) Obviousness Rejections

The Supreme Court in *KSR International Co. v. Teleflex Inc.*, reaffirmed the objective analysis for determining obviousness under 35 U.S.C. § 103: "[T]he scope and content of the prior art are . . . determined; differences between the prior art and the claims at issue are . . . ascertained; and the level of ordinary skill in the pertinent art resolved." 127 S.Ct. 1727, 1729-30, (U.S. 2007) (quoting *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966)).

M.P.E.P. 706.02(i) sets forth the contents of a Section 103(a) rejection:

To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references. *Ex parte Clap*, 227 U.S.P.Q. 972, 973 (Bd. Pat. App. & Inter. 1985).

Obviousness Rejection Based on U.S. Patent No. 4,293,740 to Gibb et al. in view of U.S. Patent No. 4,996,709 to Heep et al. and U.S. Patent No. 6,907,458 to Tomassetti et al.

The Examiner has rejected Claims 1-14 under 35 U.S.C. § 103(a) as being unpatentable over Gibb et al. in view of Heep et al. and Tomassetti et al. Applicant has cancelled Claims 1-14 mooted the obviousness rejection of those claims.

New Claims 15-31

Applicant herein introduces new Claims 15-31.

Cited Art

Gibb et al. teaches a conventional analog intercom system configured for transmitting "a.c. voice band signals" under the control of "a d.c. control signal". Col. 2:14-29. FIG. 2 of Gibb et al. is an analog loudspeaker circuit for converting the voice band signals from twisted pair 84a, 84b to loudspeaker 85. It is well known that voice band signals used in conventional telephony are frequency band limited to 4kHz or less. See for example, Heep et al., Col. 2:24-26. Compact disc quality digital audio is not limited to 4kHz but rather 22kHz or less, which provides a rich high-fidelity sound quality.

Thus, Gibb et al. is not capable of transmitting "compact disc quality digital audio signals" between its "key telephone station sets" 10a, 10b, see e.g., FIG. 1. Furthermore, the Examiner acknowledges that Gibb et al. fails to disclose arbitrating transmission and reception of signals using control signals.

Heep et al. also discloses a conventional analog intercom system configured for transmitting frequency modulated voice band signals on voice channels under control of a separate digital control channel. Col. 3:14 to Col. 4:2 and Col. 5:45-49. As clearly stated in Heep et al., the voice channels are band limited to approximately 4kHz. Col. 3:24-26. The Examiner asserts that Heep et al. discloses a microprocessor 44 (FIG. 2) for arbitrating signal transmission and reception under the control of control signals. Col. 5:62-68 and Col. 6:1-7. While Heep et al. discloses digital control signaling, it fails

to disclose transmission of “compact disc quality streaming digital audio signals” between its telephone stations, 1, FIG. 1.

Tomassetti et al. discloses transmission of digital audio signals in digital multi-room, multi-source entertainment and communications network. Title and Abstract. However, unlike the present invention, all digital audio signals transmitted according to Tomassetti et al. must be routed through one or more central “entertainment hubs 102” before being distributed to a final destination. FIGS. 1-2 and 9; Col 3:66 to Col. 4:39; Col. 11:61-64.

Analysis of New Claims 15-31 vs. Cited Art

Independent Claim 15 recites the limitation: “sending and receiving compact disc (CD) quality streaming digital audio signals over a digital audio bus directly to another digital audio network station without transmission through an intermediate central hub”. Neither Gibb et al. nor Heep et al. disclose transmission of “compact disc quality streaming digital audio signals” over a digital audio bus as recited in Claim 15. Tomassetti et al. also fails to disclose transmission of digital audio “without transmission through an intermediate central hub” as recited in Claim 15. New Claims 16-22 depend from new Claim 15, and are thus also believed to be novel and nonobvious over the Gibb et al., Heep et al. and Tomassetti et al. references.

Similarly, new independent Claim 23 recites the limitation: “streaming CD quality digital audio signals directly between each other over the digital audio bus without transmission through a central hub”. New Claims 24-27 depend from new Claim 23, and are thus also believed to be novel and nonobvious over the Gibb et al., Heep et al. and Tomassetti et al. references.

Likewise, new independent Claim 28 recites the limitation: “streaming CD quality digital audio signals directly between other stations over the digital audio bus, without transmission through a central hub”. New Claims 29-31 depend from new Claim 28, and are thus also believed to be novel and nonobvious over the Gibb et al., Heep et al. and Tomassetti et al. references.

The digital audio transmission standards that were established at the time of filing of this application included the Sony/Panasonic Digital InterFace (S/PDIF) and Audio Engineering Society/European Broadcasting Union (AES/EBU). S/PDIF and AES/EBU are both commonly used standards for sending streaming digital audio from one audio device to another audio device in a single direction using either an electrical wire (often called coaxial cable) or a fiber optic cable. Another emerging standard is the High Definition Multimedia Interface (HDMI) which is becoming a defacto standard for transmitting both digital audio and digital video signals. Digital audio transmission standards such as S/PDIF and HDMI use a *single direction*, point-to-point connection topology which *streams* the digital audio data and *does not* send it in a packetized format. Thus, S/PDIF and HDMI cannot be used to send streaming digital audio *bidirectionally* without some additional scheme for switching arbitration. Digital audio transmissions standards such as S/PDIF and HDMI are required for transmitting multichannel audio formats such as Dolby Digital and DTS.

The method recited in Claim 28 is novel because it defines a switching arbitration scheme that allows bidirectional transmission of multi-channel audio formats such as Dolby Digital™ and DTS™ using the required digital audio transmission standards S/PDIF and HDMI which otherwise would not allowed bidirectional transmission of streaming digital audio signals.

Because none of the cited art appears to disclose all of the limitations of new independent Claims 15, 23 and 28, new Claims 15-31 are believed to be patentable over Gibb et al., Heep et al. and Tomassetti et al.

CONCLUSION

Claims 15-31 are believed to be in condition for allowance, and an early notice thereof is respectfully solicited. Should the Examiner determine that additional issues remain which might be resolved by a telephone conference, the Examiner is respectfully invited to contact Applicants' undersigned attorney.

The Commissioner is hereby authorized to charge any additional fee or to credit any overpayment in connection with this Amendment to Deposit Account No. 50-0881.

Respectfully Submitted,



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